REMARKS

The Office Action dated February 26, 2008 has been received and carefully studied.

The Examiner newly rejects claims 1-3, 5-9, 11-16, 27, 32 and 33 under 35 U.S.C. §103(a) as being unpatentable over Mizuochi, JP 62025229 in view of Guest, U.S. Patent No. 3,691,819, and further in view of Lara, U.S. Patent No. 4,799,391. The Examiner admits that Mizuochi does not discloses details of the device comprising a transmitter/receiver and neutral buoyancy, and cites Guest as disclosing a leak location device comprising a transmitter/receiver, and Lara as disclosing a pig monitoring the pipeline having neutral buoyancy. The Examiner considers that it would have been obvious to modify Mizuochi by employing a transmitter/receiver and employing neutral buoyancy in view of these secondary references.

The Examiner also rejects claims 17-26 under 35 U.S.C. §102(b) (sic, §103(a)) as being anticipated (sic, unpatentable) over Mizuochi in view of Lara (and presumably further in view of Guest). The Examiner again cites Lara for its disclosure of a device with neutral buoyancy, and again cites Guest for its disclosure of a leak location device comprising a transmitter/receiver.

By the accompanying amendment, claims 1 and 17 have been amended to recite that the device is positioned out of contact with the pipeline. Support for the amendment can be found in Figures 1, 4 and 5, and on page 9, lines 11-21 of the published PCT application, for example.

Although the features listed by the Examiner may be present in the references cited, it is plainly apparent from those descriptions and drawings that these features are intended for use in traditional "pig" type apparatus, which have a substantial and significant amount of contact with the wall of the pipeline, in all cases. Indeed, in both Mizuochi and Guest the leak detection device which passes along the pipeline interior relies upon contact with the inner wall of the pipeline to guide the movement. In Mizuochi, the external dimensions of the device are such as to contact the inner wall of the pipeline as shown in Figure 1. Contact with the internal surface of the pipeline causes problems in the form of dislodgement of debris from the pipeline which contaminates the fluid therein and may cause the fluid to be unusable for a significant period of time. The contact with the internal surface of the pipeline may

also cause the creation of noise, which can mask or render the signals indicative of leakage unclear.

Contact with the wall of the pipeline is particularly apparent in Lara (US 4,799,391) where the pig device is in constant contact with the walls of the pipeline in order to determine the curvature of the same. In Lara, the neutral buoyancy feature relied upon by the Examiner in rejecting the instant claims is included to prevent false measurements from the substantially rigid support members of the device. It is apparent a buoyant pig would exert a greater degree of force on some of the substantially rigid support members when navigating a curve, more than would be exerted by a neutral buoyancy device, thereby creating a false measurement of curvature.

In contrast, the neutral buoyancy feature of the present invention is included to minimize or eliminate contact with the wall of the pipe by ensuring that the device is substantially positioned in the fluid, out of contact with the pipeline. As noted previously, this prevents material becoming dislodged and contaminating the fluid flowing through the pipe. The neutral buoyancy feature of the device allows it to be positioned within the liquid, substantially centrally of the pipeline without the need for guide means to be provided or for the device to

have the same dimension as the pipeline walls so as to position the same.

Accordingly, none of Mizuochi, Guest, or Lara discloses or suggests that the device is positioned in a pipeline out of contact with the pipeline as now recited in the instant claims. In fact, the cited references teach away from this feature. Moreover, even were one skilled in the art motivated to combine the teachings of Guest and Lara with Mizuochi and provide the Mizuochi device with neutral buoyancy, there is no teaching or suggestion of positioning the device within the fluid out of contact with the pipeline as now claimed.

It is noted that in Harper, cited by the Examiner as showing the state of the art, although the modules are designed to be neutrally buoyant to minimize contact with the pipe wall, in fact the device is required to be in contact with the pipe wall and centralized therein by spacer means 39, preferably in the form of springs which press gently against the pipe wall (column 6, line 59). In addition to this, the Harper device comprises a series of modules linked together, which is a very different construction to the single discreet unit of the present invention.

Rantala, also cited by the Examiner as showing the sate of the art, discloses a device having the neutral buoyancy feature to make it more compatible with the medium in which it travels, such as solids transport systems in mining backfills and the like. The specific gravity of the device is adjusted to control its travelling speed and to make it neutrally buoyant. Most importantly the device disclosed is used to measure the properties of the medium in which it travels, not the condition of the pipeline itself (column 2, lines 3-16). Therefore, in the Rantala references, the device is neutrally buoyant to be compatible with the media and record the properties of the same, whereas the device in the current invention is neutrally buoyant to avoid contact with the pipeline and thereby reducing the chance of dislodging material from the pipe wall, the condition of which it is detecting.

Reconsideration and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

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